

REMARKS

Reconsideration of the present patent application is respectfully requested. Claims 1-22 are pending in this application. By this Amendment, Claims 1, 10, 11, 16, and 21 have been amended.

I. Rejection of Claims 1, 10, 15 and 16 under §102 – Thomas

Independent claims 1 and 10 were rejected under 35 USC §102(b) as being anticipated by Thomas (United States Patent No. 6,391,098). The Office Action states that:

“Thomas is considered to disclose the claimed assembly and method comprising: an air dryer 24 including a manifold and a desiccant cartridge 34, a bore A1 or A2 running through said manifold; and a fastener, which includes a spin-on desiccant cartridge, disposed in said bore, wherein air flow passing through the air dryer intersects the bore and communicates to a purge volume, wherein the said fitting is secured to a reservoir.”

For the following reasons, Applicants respectfully disagree. Claims 1 and 10 are directed to an air dryer with an air flow path that is directed through a fastener bore. Specifically, Claim 1, as amended, recites, in pertinent part,

“an air dryer including a manifold and a desiccant cartridge;
a bore running through said manifold; and
a fastener disposed in said bore, wherein air flow passing through the air dryer intersects the bore and communicates to a purge volume, wherein said fastener connects said air dryer manifold to the purge volume.” (emphasis added).

Claim 10, as amended, recites, in pertinent part,:

“a manifold, wherein said manifold includes a bore for insertion of a mounting fastener, and
a spin-on desiccant cartridge,
wherein said manifold bore communicates air between the air dryer and a purge volume and wherein said mounting fastener connects said air dryer manifold to the purge volume.” (emphasis added).

Claims 15 and 16 are method claims that are directed to methods of drying air including the step of passing air through a fastening bore. Specifically, Claim 15 recites, in pertinent part,:

“purging the desiccant bed with a purge flow from a purge volume to regenerate the desiccant bed; and
exhausting said purge flow after it has passed through said desiccant bed;
wherein said purge flow passes from said purge volume via *a bore in said manifold in which a fastener securing said air dryer to the vehicle is disposed.*” (emphasis added).

Claim 16, as amended, recites, in pertinent part,:

“a means for securing said air dryer to an air reservoir, wherein said air reservoir includes a purge volume;
wherein means for securing said air dryer includes a means for communicating air between said air dryer and said purge volume and a *fastening means disposed within said means for communicating air* between said air dryer and said purge volume, *said fastening means securing said air dryer to said air reservoir.*” (emphasis added)

Each of these claims, namely claims 1, 10, 15 and 16, include an element of a fastener that is disposed within a bore or communication means that provides an air passageway between the air dryer and the purge volume, wherein the fastener secures the air dryer to the purge volume or reservoir. This element is not present in Thomas. Thomas discloses an integral air dryer-reservoir, wherein the desiccant cartridge is disposed within the reservoir. Figure 4 of Thomas is reproduced below.

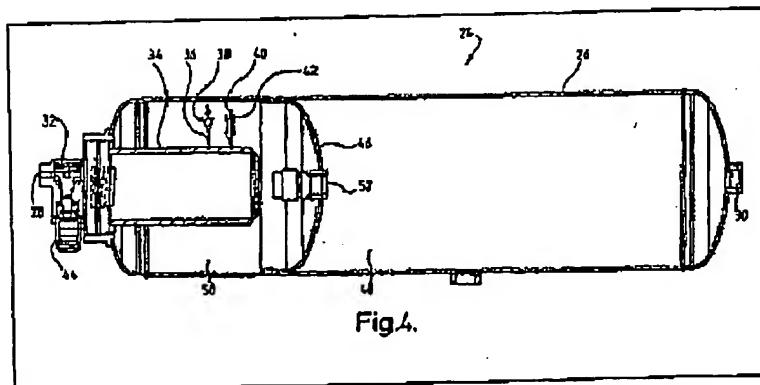


Figure 4 of United States Patent No. 6,391,098 - Thomas

In Thomas, the desiccant compartment (34) is inserted into the reservoir (24), which includes partitioned sections. The desiccant compartment is threadably secured to control valve (32). Thomas does not include a fastening means for securing the air dryer to the purge volume, wherein the fastener is disposed within a bore or communication means. Furthermore, this connection in Thomas does not provide for communication between the air dryer and the purge volume. Instead, Thomas discloses two separate passageways (36 and 40) that communicate air between the desiccant compartment and second compartment (50). Thomas does not teach or disclose each element of the claimed invention. As such, independent claims 1, 10, 15 and 16 are not anticipated by Thomas and reconsideration of this rejection is respectfully requested.

II. Rejection of Claims 11 and 18 under §102 -- Thomas

Independent claims 11 and 18 were rejected under 35 USC §102(b) as being anticipated by Thomas (United States Patent No. 6,391,098). The basis the Office action set forth for this rejection is the same as set forth above.

Claim 11, as amended, recites, in pertinent part,:

“a manifold;
a desiccant cartridge mounted on said manifold; and
*a fastener disposed within a bore running through said manifold;
wherein said fastener is secured to a reservoir.*” (emphasis added).

As stated above, Thomas does not provide a fastener disposed within a bore running through a manifold. In Thomas, if the fastener is the threaded connection between the desiccant compartment and the control valve, such fastener is certainly not disposed within the bore A1 or A2 as suggested in the Office Action. Since Thomas does not teach each element of the claimed invention, Thomas does not anticipate claim 11. Reconsideration of this rejection is respectfully requested.

Claim 18 recites, in pertinent part,:

“an air dryer;
a single means for securing said air dryer to a purge reservoir; and
a means for *preventing rotation of the air dryer* when said air dryer is secured to the
purge reservoir.”

The Office Action does not call out a portion of Thomas that teaches the means for preventing rotation of the air dryer as stated in claim 18. In fact, the Office Action later states that Thomas does not teach the anti-rotation mechanism. As such, claim 18 is not anticipated by Thomas. Furthermore, claim 18 is not obvious in view of Thomas and Shamine for the same reasons as set forth below regarding claim 17.

II. Rejection of Claims 14 and 17 under §103 – Thomas & Shamine

Independent claim 17 was rejected under 35 USC §103(a) as being unpatentable over Thomas in view of Shamine et al. (United States Patent No. 5,622,544). The Office Action states that Thomas is considered to disclose the claimed invention, except for the claimed interlock or anti-rotation mechanism. The Office Action states that Shamine is considered to disclose the claimed interlock or anti-rotation mechanism at column 5, lines 7-21, wherein the disclosed interlock function implies the claimed anti-rotation mechanism to prevent aid dryer rotation. The Office Action concludes that it would have been obvious for one skilled in the art to combine the teachings of primary reference Thomas with the teachings in secondary reference Shamine for the claimed interlock or anti-rotation mechanism for the purpose of providing a secure fastener connection of an air dryer connection to its supporting housing. For the following reasons, Applicants respectfully disagree.

Independent claim 17 recites, in pertinent part,:

*“an air dryer including a manifold and desiccant cartridge;
a single fastener for securing said manifold to a vehicle; and
an anti-rotation mechanism that prevents rotation of the air dryer when said
air dryer is secured to the vehicle.”* (emphasis added).

Independent claim 14 recites, in pertinent part,:

*“aligning an air dryer with a reservoir such that one or more stabilizing
mechanisms interlock to prevent rotation of the air dryer relative to the
reservoir;
inserting a fastener through the manifold and into a threaded member in the
reservoir; and
tightening said fastener to said reservoir.”* (emphasis added).

Claims 14 and 17 recite that the anti-rotation mechanism prevents the rotation of the air dryer, which includes a manifold and desiccant cartridge. Shamane teaches "cartridge 12 is prevented from rotating by interlocking between tabs 86 and features on body casting 68." As such Shamane teaches anti-rotation of the desiccant cartridge *relative to the manifold or housing*. The combination of Thomas and Shamane, even if such combination is accurate, does not arrive at the claimed invention of claims 14 and 17. As such, claims 14 and 17 are not rendered unpatentable in view of Thomas and Shamane.

III. Rejection of Claim 21 under §103 – Thomas

Independent claim 21 was rejected under 35 USC §103(a) in view of Thomas. The Office Action states that Thomas is considered to disclose the claimed invention, except for the claimed bracket to rail height ratio. The Office Action states that it would have been obvious matter of design choice for one skilled in the art to claim the mounting bracket to rail height ratio, since it has not been specified that the claimed mounting bracket to rail height ratio provides any advantages over the mounting bracket to rail height ratio shown and implicitly discussed in the primary reference Thomas. For the following reasons Applicants disagree.

Independent claim 21 recites, in pertinent part:

"an air dryer including a manifold and desiccant cartridge; and
a reservoir, wherein said air dryer is coupled to said reservoir, wherein said
reservoir includes a mounting bracket that is coupled to a rail of a vehicle,
said rail of a vehicle having a height;
wherein said *mounting bracket includes a height that is less than 75 percent of
said rail height.*" (emphasis added).

In the background of the present application, Applicants state that a constant problem commercial vehicles face is that there is only so much truck rail space for mounting items, such as air dryers. As such, the use of less of the truck rail for the mounting bracket provides additional truck rail mounting space. Thomas does not teach, disclose, or suggest anything to about mounting the reservoir to the truck rail, let alone reducing the height of the mounting bracket to less than the height of the truck rail. Since Thomas does not teach or suggest a mounting bracket that includes a height less than 75 percent of the rail height, Thomas does not render claim 21 unpatentable.

IV. Dependent Claims:

Applicant submits that the dependent claims are patentable because they *at least* incorporate the same limitations as their respective independent claims.

V. §112 Rejection:

Claim 22 has been amended to depend from claim 21. No other amendments have been made to claim 22.

VI. Conclusion:

Based on the foregoing remarks and amendments, Applicant believes that all of the claims in this case are now in condition for allowance and an indication to that effect is respectfully requested. Furthermore, if the Examiner believes that additional discussions or information might advance the prosecution of this case, the Examiner should feel free to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

Date: 10/8/04

By: 

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